

## EAST Search History

## EAST Search History (Prior Art)

| Ref # | Hits   | Search Query   | DBs  | Default Operator | Plurals | Time Stamp          |
|-------|--------|--|--|------------------|---------|---------------------|
| L1    | 7568   | ((257/412) or (257/410) or (257/411) or (257/E21.01) or (257/E21.274) or (438/287) or (438/591) or (438/785)).CCLS.  | US-PGPUB;<br>USPAT   | OR               | OFF     | 2010/07/03<br>17:46 |
| S1    | 2      | "20050247985"  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR               | ON      | 2007/01/07<br>17:53 |
| S3    | 21739  | high adj dielectric adj<br>constant  | US-PGPUB;<br>USPAT   | OR               | ON      | 2007/05/08<br>14:59 |
| S4    | 2218   | gate and (gate near insulat<br>\$3) and (Hfsi Zr)  | US-PGPUB;<br>USPAT   | OR               | ON      | 2007/06/02<br>17:24 |
| S5    | 710    | S3 and S4  | US-PGPUB;<br>USPAT   | OR               | ON      | 2007/05/08<br>15:07 |
| S6    | 174665 | gate and silicon oxide and<br>depth and distribut\$3 and<br>((gate near insulat\$3) near<br>(Zr Hf Ta Al Ti Nb Sc Y La<br>Ce Pr Nd Sm Eu Gd Tb<br>Dy Ho Er Tm Yb Lu))                                | US-PGPUB;<br>USPAT   | OR               | ON      | 2007/05/08<br>15:07 |
| S7    | 2075   | S6 and S4  | US-PGPUB;<br>USPAT   | OR               | ON      | 2007/05/08<br>15:07 |
| S8    | 204    | S5 and @ad<"20020619"  | US-PGPUB;<br>USPAT   | OR               | ON      | 2007/05/08<br>15:08 |
| S13   | 569    | (tan hfo si) adj mosfet  | US-PGPUB;<br>USPAT   | OR               | ON      | 2007/06/02<br>17:38 |
| S14   | 310    | S13 and @ad<"20020627"   | US-PGPUB;<br>USPAT   | OR               | ON      | 2007/06/02<br>17:30 |
| S15   | 0      | (tan hfo) adj mosfet   | US-PGPUB;<br>USPAT   | OR               | ON      | 2007/06/02<br>17:38 |
| S16   | 21     | (tan hfo) near2 mosfet   | US-PGPUB;<br>USPAT   | OR               | ON      | 2007/06/02<br>17:42 |
| S17   | 20     | (hag-ju near cho).in.  | US-PGPUB;<br>USPAT   | OR               | ON      | 2007/06/02<br>17:47 |
| S18   | 14     | ("20020104481"  <br>"5316982"   "5668021"  <br>"5668054"   "6153519"  <br>"6168991"   "6203613"  <br>"6204204"   "6221712"  <br>"6357901"   "6492217"  <br>"6504214"   "6537901"  <br>"6607958").PN. | US-PGPUB;<br>USPAT   | OR               | ON      | 2007/06/02<br>17:54 |

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| S19 | 7      | "6380104"   | US-PGPUB;<br>USPAT   | OR | ON  | 2007/06/02<br>23:10 |
| S20 | 0      | (Tanaka adj nobufumi).in.   | US-PGPUB;<br>USPAT   | OR | ON  | 2007/06/02<br>22:02 |
| S21 | 0      | (Tanaka near nobufumi).<br>in.  | US-PGPUB;<br>USPAT   | OR | ON  | 2007/06/02<br>22:02 |
| S22 | 148    | (nobufumi).in.  | US-PGPUB;<br>USPAT   | OR | ON  | 2007/06/02<br>22:02 |
| S23 | 637302 | nitrogen  | US-PGPUB;<br>USPAT   | OR | ON  | 2007/06/02<br>22:03 |
| S24 | 17     | S22 and S23   | US-PGPUB;<br>USPAT   | OR | ON  | 2007/06/02<br>22:04 |
| S25 | 0      | (stack\$3 adj gate) with<br>(nitrogen adj concentrat<br>\$3) with (high adj dielectric<br>adj constant) and (gate<br>near insulat\$3) and<br>(silicon adj oxide)                                | US-PGPUB;<br>USPAT   | OR | ON  | 2007/06/02<br>22:06 |
| S26 | 7      | (stack\$3 adj gate) and<br>(nitrogen adj concentrat<br>\$3) and (high adj dielectric<br>adj constant) and (gate<br>near insulat\$3) and<br>(silicon adj oxide)                                  | US-PGPUB;<br>USPAT   | OR | ON  | 2007/06/02<br>22:09 |
| S27 | 16     | (stack\$3 adj gate) and<br>(nitrogen adj concentrat<br>\$3) and (high adj dielectric<br>adj constant)   | US-PGPUB;<br>USPAT   | OR | ON  | 2007/06/02<br>22:09 |
| S28 | 38     | (stack\$3 near gate) and<br>(nitrogen adj concentrat<br>\$3) and (high adj dielectric<br>adj constant)  | US-PGPUB;<br>USPAT   | OR | ON  | 2007/06/02<br>22:22 |
| S29 | 40     | "5891798"   | US-PGPUB;<br>USPAT   | OR | ON  | 2007/06/02<br>22:22 |
| S30 | 158    | Dharmarajan.in.   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2007/06/02<br>22:59 |
| S31 | 6      | "6365467"   | US-PGPUB;<br>USPAT   | OR | ON  | 2007/06/02<br>23:10 |
| S32 | 8784   | ((438/197) or (438/299) or<br>(438/585) or (438/587) or<br>(438/588) or (438/592) or<br>(438/652) or (438/653) or<br>(438/654) or (438/656) or<br>(438/657) or (438/680) or<br>(438/684)).CCLS. | US-PGPUB;<br>USPAT   | OR | OFF | 2007/06/11<br>10:47 |

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| S33 | 0       | high near dielectric near3<br>gate near instulat\$3                          | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/01/20<br>16:31 |
| S34 | 0       | high near dielectric and<br>gate near instulat\$3                            | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/01/20<br>16:41 |
| S35 | 5868    | (high near dielectric) and<br>(gate near insulat\$3)                         | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/01/20<br>16:41 |
| S36 | 950     | stack\$3 near gate near<br>electrode   | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/01/20<br>16:47 |
| S37 | 47      | S35 and S36  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/01/20<br>16:47 |
| S38 | 1053    | (257/411).CCLS.  | US-PGPUB;<br>USPAT; USOCR;<br>EPO; JPO;<br>DERWENT;<br>IBM_TDB | OR | OFF | 2008/01/22<br>08:16 |
| S39 | 576     | (hafnium near oxynitride)  | US-PGPUB;<br>USPAT   | OR | ON  | 2008/09/23<br>10:44 |
| S40 | 1732595 | (hafnium near oxynitride)<br>near\$2 (gate near (insulat<br>\$3 dielectric)) | US-PGPUB;<br>USPAT   | OR | ON  | 2008/09/23<br>10:44 |
| S41 | 23      | (hafnium near oxynitride)<br>near2 (gate near (insulat<br>\$3 dielectric))   | US-PGPUB;<br>USPAT   | OR | ON  | 2008/09/23<br>10:44 |
| S42 | 1       | "20050263754"  | US-PGPUB;<br>USPAT   | OR | ON  | 2008/09/24<br>11:38 |
| S43 | 5702    | porous near silicon  | US-PGPUB;<br>USPAT   | OR | ON  | 2008/09/24<br>12:08 |
| S44 | 3073    | porous near silicon  | USPAT  | OR | ON  | 2008/09/24<br>12:08 |
| S45 | 27834   | sony.as.   | USPAT  | OR | ON  | 2008/09/24<br>12:09 |
| S46 | 27      | S45 and S44  | USPAT  | OR | ON  | 2008/09/24<br>12:09 |
| S47 | 892     | S44 and (sic 3c-sic (silicon<br>near carbide))                               | USPAT  | OR | ON  | 2008/09/24<br>12:15 |

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|-----|------|--|--|----|----|------------------|
| S48 | 1    | S47 and (single near crystal)  | USPAT  | OR | ON | 2008/09/24 12:15 |
| S49 | 14   | ("4090851"   "4213940"   "4264565"   "4298629"   "4312923"   "4346068"   "4368180").PN. OR ("4515755").URPN. | US-PGPUB; USPAT; USOCR                                   | OR | ON | 2008/09/24 12:16 |
| S50 | 11   | (single near crystal) and (sic 3c-sic (silicon near carbide))  | USPAT  | OR | ON | 2008/09/24 12:17 |
| S51 | 261  | S47 and (single near crystal)  | USPAT  | OR | ON | 2008/09/24 12:17 |
| S52 | 1705 | (single near crystal) with (sic 3c-sic (silicon near carbide))   | USPAT  | OR | ON | 2008/09/24 12:19 |
| S53 | 2623 | (single near crystal) same (sic 3c-sic (silicon near carbide))   | USPAT  | OR | ON | 2008/09/24 12:19 |
| S54 | 61   | S47 and S52  | USPAT  | OR | ON | 2008/09/24 12:19 |
| S55 | 94   | S47 and S53  | USPAT  | OR | ON | 2008/09/24 12:19 |
| S56 | 3073 | porous near silicon  | USPAT  | OR | ON | 2008/09/24 15:22 |
| S57 | 892  | S56 and (sic 3c-sic (silicon near carbide))  | USPAT  | OR | ON | 2008/09/24 15:22 |
| S58 | 0    | S57 and (cubic near boron near phosphate)  | USPAT  | OR | ON | 2008/09/24 15:31 |
| S59 | 9    | S57 and (boron near phosphate)   | USPAT  | OR | ON | 2008/09/24 15:31 |
| S60 | 21   | S57 and ((boron near phosphate) c-bp bp)   | USPAT  | OR | ON | 2008/09/24 15:32 |
| S61 | 0    | ep1298234  | US-PGPUB; USPAT  | OR | ON | 2008/09/24 15:41 |
| S62 | 0    | ep1298234  | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/09/24 15:41 |
| S63 | 2    | ep near "1298234"  | US-PGPUB; USPAT; USOCR; FPRS; EPO; JPO; DERWENT; IBM_TDB | OR | ON | 2008/09/24 15:41 |

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| S64 | 2       | "20030056718"   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/09/24<br>15:41 |
| S65 | 12      | "5588994"   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/09/24<br>15:46 |
| S66 | 2       | S65 and boron   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/09/24<br>15:47 |
| S67 | 32      | c-BP  | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/09/24<br>15:50 |
| S68 | 15      | "6844604"   | US-PGPUB;<br>USPAT; USOCR;<br>FPRS; EPO;<br>JPO;<br>DERWENT;<br>IBM_TDB | OR | ON  | 2008/09/24<br>19:44 |
| S69 | 2755    | (single near crystal) same<br>(sic 3c-sic (silicon near<br>carbide))  | USPAT   | OR | ON  | 2009/04/12<br>20:04 |
| S70 | 6744    | ((257/412) or (257/410) or<br>(257/411) or (257/E21.01)<br>or (257/E21.274) or<br>(438/287) or (438/591) or<br>(438/785)).CCLS.   | US-PGPUB;<br>USPAT  | OR | OFF | 2009/04/12<br>20:04 |
| S71 | 11172   | ((438/197) or (438/299) or<br>(438/585) or (438/587) or<br>(438/588) or (438/592) or<br>(438/652) or (438/653) or<br>(438/654) or (438/656) or<br>(438/657) or (438/680) or<br>(438/684)).CCLS. | US-PGPUB;<br>USPAT  | OR | OFF | 2009/11/08<br>22:17 |
| S72 | 2541423 | (oxynitride) near\$2 ((insulat<br>\$3 dielectric))  | US-PGPUB;<br>USPAT  | OR | ON  | 2009/11/08<br>22:18 |
| S73 | 3814    | (oxynitride) near2 ((insulat<br>\$3 dielectric))  | US-PGPUB;<br>USPAT  | OR | ON  | 2009/11/08<br>22:18 |
| S74 | 1727    | S73 same gate   | US-PGPUB;<br>USPAT  | OR | ON  | 2009/11/08<br>22:18 |
| S75 | 314     | S74 and (high near k near<br>dielectric)  | US-PGPUB;<br>USPAT  | OR | ON  | 2009/11/08<br>22:19 |

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|-----|-------|--|---------------------------|----|----|---------------------|
| S76 | 190   | "6020024"  | US-PGPUB;<br>USPAT        | OR | ON | 2010/04/10<br>17:23 |
| S77 | 18515 | cho.in.  | US-PGPUB;<br>USPAT        | OR | ON | 2010/07/01<br>10:46 |
| S78 | 211   | S77 and nitrogen and tan   | US-PGPUB;<br>USPAT        | OR | ON | 2010/07/01<br>10:47 |
| S79 | 18515 | cho.in.  | US-PGPUB;<br>USPAT        | OR | ON | 2010/07/01<br>10:58 |
| S80 | 211   | S79 and nitrogen and tan   | US-PGPUB;<br>USPAT        | OR | ON | 2010/07/01<br>10:58 |
| S81 | 1     | "20090121301"  | US-PGPUB;<br>USPAT        | OR | ON | 2010/07/02<br>14:06 |
| S82 | 10    | ("5480828"   "5672521"  <br>"5712208"   "6033998"  <br>"6136654"   "6165849"  <br>"6265327"   "6426305"  <br>"6548366"   "6686298").<br>PN. OR ("7157339").<br>URPN. | US-PGPUB;<br>USPAT; USOCR | OR | ON | 2010/07/03<br>15:30 |
| S83 | 511   | nitrogen with (high near<br>dielectric)  | US-PGPUB;<br>USPAT        | OR | ON | 2010/07/03<br>16:15 |
| S84 | 292   | S83 and polysilicon  | US-PGPUB;<br>USPAT        | OR | ON | 2010/07/03<br>16:15 |
| S85 | 205   | S84 and concentration  | US-PGPUB;<br>USPAT        | OR | ON | 2010/07/03<br>16:16 |

**EAST Search History (Interference)**

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**7/3/2010 5:47:25 PM****C:\Documents and Settings\tchui\My Documents\EAST\Workspaces\10519084.wsp**